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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,208	01/11/2002	Ilya Chizhov	TWI-14710	9755

7590 10/24/2003

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EXAMINER
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BARTH, VINCENT P

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/044,208	<b>Applicant(s)</b> CHIZHOV ET AL.	
	<b>Examiner</b> Vincent P. Barth	<b>Art Unit</b> 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2002.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>0402</u> . | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. This Application has been filed with Drawings which appear to contain certain defects, which may be either remedied through amendments, or in the alternative Applicants may reply with discussions as to why such features are drawn as intended, thus not presenting defects. For example, Figure 2 purports to illustrate the center of the field of view (element 300), however, the lead line points to a square region. In other words, one would expect the center of the field of view to be a point, rather than a region. Accordingly, this feature should be amended or explained by Applicants in the reply to the instant Office Action. In this connection, the field of view is perhaps one of the key features of the invention, as well as its relationship to (i) the center of rotation of the stage (Fig. 2, element 202), and (ii) offset difference (Fig. 2, element 204). However, these features are drawn in extremely small scale in Figure 2, thus presenting difficulty in legibility. Figure 4 (especially the area around element 208) and Figure 5 also have similar difficulties, since each illustrate the top view of the invention. Certainly, Figure 6 is a magnified view of Figure 5 (Spec. at pg. 10, last para.), nevertheless, each figure must properly represent what it purports to illustrate. See 37 CFR §1.84, especially §1.84(h) regarding views and §1.84(k) regarding scale. The Examiner would not find slight enlargements or necessary changes in proportions to be new matter, but rather, such changes would likely be necessary improvements towards compliance with 37 CFR §1.84. Indeed, the Examiner suggests such enlargements. However, caution should be exercised on introducing any new feature elements, which might represent new matter. On a minor note, the angle theta in Figure 2 looks more than

a phi than a theta, and should be corrected. Finally, Figure 2 contains an inner circle which is concentric to the outer edge of the chuck (Fig. 2, element 102). This inner concentric circle is not labeled, or otherwise identified, thus the Examiner would appreciate a discussion in the reply as to what this feature represents.

2. Also note that the figure numbers throughout the Drawings are too small, although the Examiner expects that such would be changed when formal drawings are submitted. The figure numbers must be larger than the reference characters and numbers. See 37 CFR §1.84(t) and especially §1.84(u)(2).

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Referring to the independent Claims 1, 7, 12, and 19-21, each contains similar language which appears to be problematic, therefore these will be discussed concurrently. The invention as set forth in the Specification, and as illustrated in Figure 2, involves calculations based upon the *center* of the field of view (hereinafter "FOV"). However, the independent claims are drafted to indicate merely the FOV, without limitation to the center of the FOV, or at least a single point (i.e. a coordinate) within the FOV. The particular phrase which forms the basis of the rejections

may be exemplified in Claim 1, which sets forth that, "...to determine an offset *from the field of view* to the center of rotation of the polar coordinate stage..." (emphasis added). In other words, this language is written broadly to mean *any* point, or, perhaps more importantly, a *plurality* of points within the field of view, rather than a single point representing the center of the field of view. This, as opposed to the following language which might have been used: "...to determine an offset *from the center of the field of view* to the center of rotation of the polar coordinate stage...". In referring to Figure 2, the Specification sets forth that,

"Once a distinctive site 210 has been positioned at the center of the field of view 300 ..." (Spec. at pg. 6, last para., emphasis added),

"would result in the distinctive site 210 being located at the center of the field of view 300..." (Spec. at pg. 8, last para., emphasis added), and continues, "It should be noted that it need not be [the] center of [the] field of view, but this step should result in the distinctive site being positioned somewhere in the field of view 300 ..." (Spec. at pg. 9, first para., emphasis added). (Note, that this latter portion will be discussed momentarily)

The language cited above would lead one to believe that the invention requires a single point, and that such point is the center of the FOV. However, since the FOV is, strictly speaking, an area, it contains an infinite number of points (i.e. coordinates). Such infinite number of points does not seem consistent with the invention which seems to call for coordinate data, or particular "sites". Accordingly, the language cited in the independent claims renders each indefinite. With regard to the above cited language in which the point "need not be the center of the FOV", such language may result in a rejection in future Office Actions under §112 first paragraph as not enabling. In the reply to the instant Office Action, Applicants are respectfully requested to explain how such alternative embodiment is consistent with the remaining portions of the Specification and Drawings in which the center of the FOV is required for the computations.

Nevertheless, even assuming *arguendo* that a single point need not be at the center of the FOV (thus avoiding a §112 first paragraph rejection), in order to avoid the §112 second paragraph rejections Applicants must still either amend the claims to include a single point, explain how an FOV does not contain an infinite number of points, or provide some other persuasive reply.

6. Referring to Claims 2-6, 8-11 and 13-18, the fourth paragraph of 35 U.S.C. §112 provides that, "A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers". Accordingly, Claims 2-6, 8-11 and 13-18 inherit the §112 second paragraph rejection of Claims 1, 7 and 12, and are therefore rejected as well. However, the claims have also been discussed below, as each may best be understood.

#### ***Comments***

7. A search has been performed concerning the subject matter of the instant Application, although none of the resulting references have formed the basis of a rejection of a rejection under 35 U.S.C. §§102 or 103. Due to the rather fundamental nature of the rejections under §112 second paragraph, and potential rejections under §112 first paragraph, comparisons to the prior art have been impeded. Accordingly, although no prior art references have been provided, and although there may indeed not be any prior art references which, either alone or in combination, form the basis of rejections under §102 or 103, the absence of references in the instant Office Action shall not presently be interpreted as a statement that the subject matter of the instant invention is allowable. Rather, a further search may be required following resolution of the issues which have been set forth as forming the basis of rejections under §112. At that time,

which is expected to be directly following a reply from Applicants, either references will be provided to reject the claims, or a reasoned statement of allowability will be provided. A reference provided by Applicants in the Information Disclosure Statement contains language which is relevant to the instant Application, and is as follows: "...rotation axis 710 is typically offset from the center of sample 310 *by an amount determined* during the prealignment and/or alignment" (col. 8, lns. 17-19, emphasis added). Although said language is arguably suggestive that a calculation of the offset distance is made, there are no further details describing how to calculate the offset such that a reasonable comparison with the instant invention can be made. Commentary on this specific point in Applicants' reply to the instant Office Action is respectfully requested.

***CONCLUSION***

8. Applicants' Claims 1-21 are rejected based on the reasons set forth above.
9. Any inquiries concerning this communication from the Examiner should be directed to Vincent P. Barth, whose telephone number is 703-605-0750, and who may be ordinarily reached from 9:00 a.m. to 5:30 p.m., Monday through Friday. The fax number for the group before final actions is 703-872-9306.
10. If attempts to reach the Examiner prove unsuccessful, the Examiner's supervisor is Frank G. Font, who may be reached at 703-308-4881.
11. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Richard A. Rosenberger  
Primary Examiner